

**MARYLAND HISTORICAL TRUST  
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes  
no ☒

Property Name: SHA Small Structure No. 10053X0, Bridge No. 10041 Inventory Number: F-8-153  
Address: MD 75 over Beaver Dam Creek Historic district: yes ☒ no  
City: Johnsville Zip Code: \_\_\_\_\_ County: Frederick  
USGS Quadrangle(s): Union Bridge  
Property Owner: MD SHA Tax Account ID Number: \_\_\_\_\_  
Tax Map Parcel Number(s): \_\_\_\_\_ Tax Map Number: 35  
Project: Rehabilitation of SHA Small Structure No. 10053X0 Agency: MD SHA  
Agency Prepared By: Architectural Historian, MD SHA  
Preparer's Name: Anne E. Bruder Date Prepared: 07/22/2008  
Documentation is presented in: Project Review and Compliance Files  
Preparer's Eligibility Recommendation: \_\_\_\_\_ Eligibility recommended ☒ Eligibility not recommended  
Criteria: ☒ A ☐ B ☒ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G  
*Complete if the property is a contributing or non-contributing resource to a NR district/property:*  
Name of the District/Property: \_\_\_\_\_  
Inventory Number: \_\_\_\_\_ Eligible: ☐ yes ☐ no Listed: ☐ yes ☐ no  
Site visit by MHT Staff ☐ yes ☒ no Name: \_\_\_\_\_ Date: \_\_\_\_\_

Description of Property and Justification: *(Please attach map and photo)*

The small structure was included in SHA's Historic Highway Bridge Inventory as SHA Bridge No. 10041, but because its length is less than twenty feet long, SHA determined that it is not a bridge, but a small structure. It is currently included in the "Deleted" category of the SHA Historic Highway Bridge Inventory because of its length.

SHA Small Structure No. 10053X0 is a 1920 Standard Plan 18-foot long concrete slab small structure. The north parapet retains the incised paneling that was typical of the 1920s structures built by the Maryland State Roads Commission on every highway in order to allow traffic to cross small bodies of water. In 1970, MD 75 was widened between Johnsville and Union Bridge. The new one matches the size of the original, it does not retain the coping or decorative incising found on the former parapet, and it is a different color. Both parapets are covered with guardrail.

SHA recommends that SHA Small Structure No. 10053X0 as not eligible for inclusion in the National Register of Historic Places. As a result of the post-1995 alterations, the small structure has lost its integrity of materials, design, workmanship, association and feeling. Additional research failed to identify events or persons of local, state or national significance and the small structure is not eligible under Criteria A or B. The small structure has lost its ability to convey its association with the 1920s highway

**MARYLAND HISTORICAL TRUST REVIEW**

Eligibility recommended \_\_\_\_\_ Eligibility not recommended ☒  
Criteria: ☐ A ☐ B ☐ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G  
MHT Comments:

Jim Tanenhaus ✓  
Reviewer, Office of Preservation Services

8/22/08  
Date

N/A  
Reviewer, National Register Program

Date

2008 02564

improvements. It is also a ubiquitous resource that is found on many of Maryland's highways, and does not convey any significance for engineering. As a result, it is not eligible for inclusion in the NRHP under Criterion C. Criterion D was not investigated as part of the standing structures studies.

**MARYLAND HISTORICAL TRUST REVIEW**

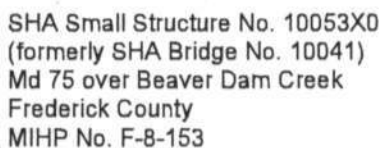
Eligibility recommended \_\_\_\_\_ Eligibility not recommended \_\_\_\_\_

Criteria:    \_\_\_ A    \_\_\_ B    \_\_\_ C    \_\_\_ D    Considerations:    \_\_\_ A    \_\_\_ B    \_\_\_ C    \_\_\_ D    \_\_\_ E    \_\_\_ F    \_\_\_ G

MHT Comments:

\_\_\_\_\_  
Reviewer, Office of Preservation Services\_\_\_\_\_  
Date\_\_\_\_\_  
Reviewer, National Register Program\_\_\_\_\_  
Date

**MIHP No. F-8-153**



UNION BRIDGE



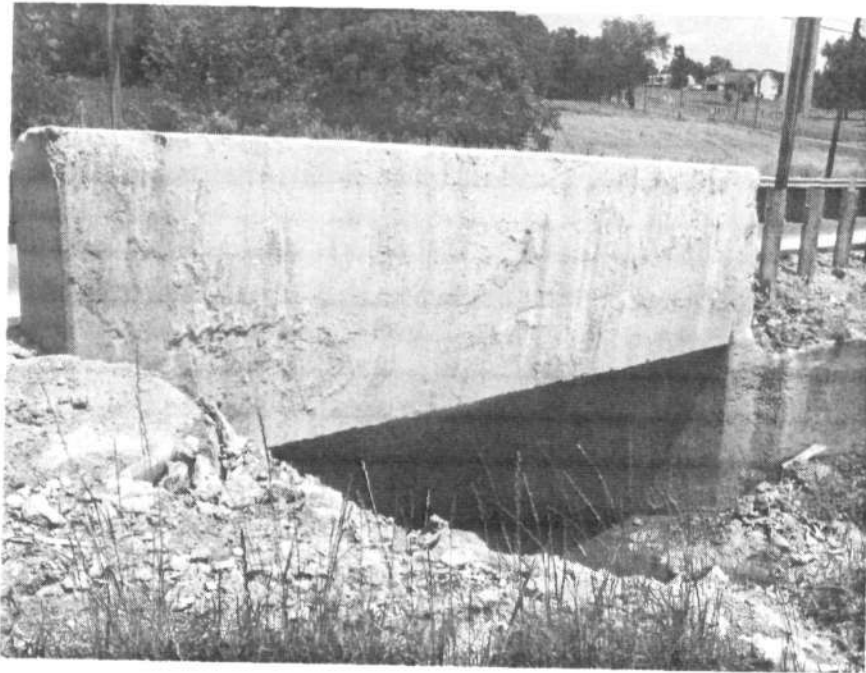
## USGS Topo Quad Index

## Roads

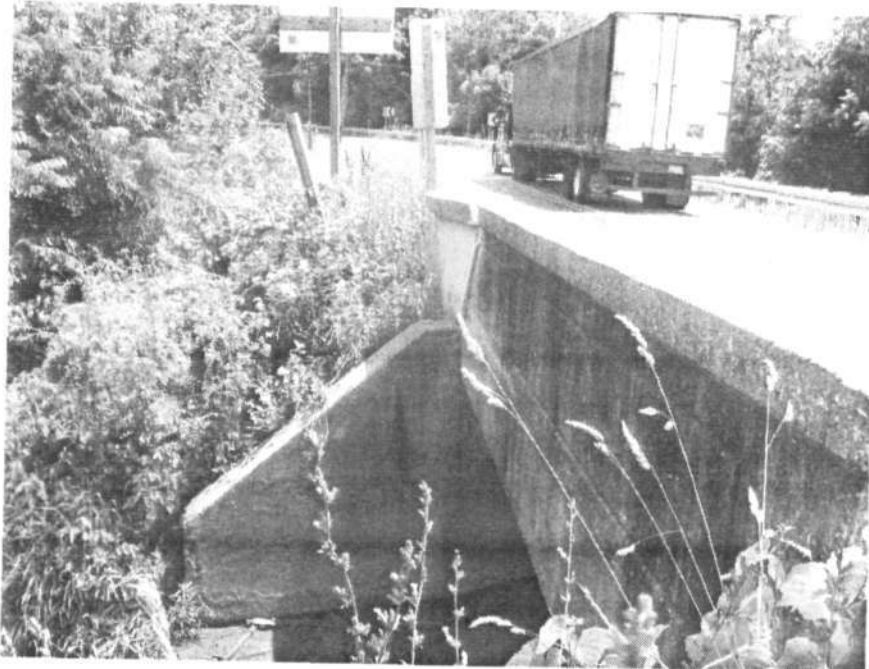
- CO  
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☐ County



Photographs of SHA Small Structure No. 10053X0 (formerly SHA Bridge No. 10041)  
MD 75 over Beaver Dam Creek, Frederick County



South parapet of Small Structure No. 10053X0 looking north



North parapet showing area that requires repair (looking east)



Looking east towards Small Structure No. 10053X0.

MARYLAND INVENTORY OF HISTORIC BRIDGES  
HISTORIC BRIDGE INVENTORY  
MARYLAND STATE HIGHWAY ADMINISTRATION/  
MARYLAND HISTORICAL TRUST

F-8-153  
MHT No. ~~F-4-106~~

SHA Bridge No. 10041 Bridge name MD 75 over Beaver Dam Creek

LOCATION:

Street/Road name and number [facility carried] MD 75

City/town Johnsville

Vicinity X

County Frederick

This bridge projects over: Road        Railway        Water X Land       

Ownership: State X County        Municipal        Other       

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes        No X  
National Register-listed district        National Register-determined-eligible district         
Locally-designated district        Other       

Name of district       

BRIDGE TYPE:

Timber Bridge       :  
Beam Bridge        Truss -Covered        Trestle        Timber-And-Concrete       

Stone Arch Bridge       

Metal Truss Bridge       

Movable Bridge       : Swing        Bascule Single Leaf        Bascule  
Multiple Leaf         
Vertical Lift        Retractable        Pontoon

Metal Girder       :  
Rolled Girder        Rolled Girder Concrete Encased         
Plate Girder        Plate Girder Concrete Encased       

Metal Suspension       

Metal Arch       

Metal Cantilever       

Concrete X :  
Concrete Arch        Concrete Slab X Concrete Beam        Rigid Frame         
Other        Type Name

**DESCRIPTION:**Setting: Urban \_\_\_\_\_ Small town \_\_\_\_\_ Rural X

**Describe Setting:** Bridge No. 10041 carries MD 75 over Beaver Dam Creek. It is near the village of Johnsville in eastern Frederick County. There are two early nineteenth century, brick two-story houses located within a few hundred yards of the bridge. The overall setting is rural.

**Describe Superstructure and Substructure:**

Bridge No. 10041 is a one span concrete slab bridge with concrete abutments and wingwalls. It has a span length of 20'. The bridge has a clear roadway width of 24'. It has an unknown design load. The construction date is also unknown although the State Highway Administration in 1991 stated that the bridge appeared to be a 1924 standard bridge. The parapets are solid and decorated with panelling and possess articulated coping stones. The wingwalls form a forty five degree angle with the center of the road. The 1993 State Highway Administration inspection report stated that there is scale on the abutment and the upstream wingwall and the top corner of the wingwall is broken. The west abutment contains numerous cracks.

The channel has an adverse alignment. The upstream flow approaches the bridge at a sharp angle and flows into the wingwall of the west abutment. The channel banks are vegetated. There is erosion behind the downstream wingwall of the east abutment and at the upstream end of the west abutment. No scour was observed.

*CLASSIFIED AS A SMALL STRUCTURE.*

**Discuss Major Alterations:**

There have been no major alterations to this bridge.

**HISTORY:**

**WHEN was the bridge built** 1920s

**This date is:** Actual X

Estimated \_\_\_\_\_

**Source of date:** Plaque \_\_\_\_\_

Design plans \_\_\_\_\_

County bridge files/inspection form \_\_\_\_\_

**Other (specify):** SHA files

**WHY was the bridge built?**

The need for a more efficient transportation network and increased load capacity in the decades following World War I.

**WHO was the designer?**

State Highway Administration

**WHO was the builder?**

State Highway Administration

**WHY was the bridge altered?**

This bridge has not been altered.

**Was this bridge built as part of an organized bridge-building campaign?**

As part of an effort by the State to increase load capacity on secondary roads during the 1930's.



**SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**

- A - Events** \_\_\_\_\_ **B- Person** \_\_\_\_\_  
**C- Engineering/architectural character** \_\_\_\_\_

**Was the bridge constructed in response to significant events in Maryland or local history?**

Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-04 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's road and bridge improvement programs mirrored economic cycles. The first road improvement program of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war-related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920 to 1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of \$3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund [with an equal sum from the counties] the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had become inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930s. Most improvements to local roads waited until the years after World War II.

With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer stated in 1906, "The general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do away with the further expense of the maintenance of expensive and dangerous wooden structures". Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

The creation of standard plans and a description of their use was first announced in the 1912-15 Reports of the State Roads Commission whereby bridges spanning up to 36 feet were to use standardized designs.

Published on a single sheet, the 1912 Standard Plans included those structures that were amenable to such an approach: slab spans, (deck) girder spans, box culverts, box bridges, abutments, and piers (State Roads Commission 1912). Slab spans, with lengths of 6 to 16 feet in two foot increments, featured a solid parapet that was integrated into the slab, with a roadway of 22 feet.



In the Report for the years 1916-1919, a revision of the standard plans was noted:

During the four years covered by this report, it has been found necessary to revise our standard plans for culverts and bridges, to take care of the increased tonnage which they have been forced to carry. Army cantonments...increased their operations several hundred per cent, and the brunt of the enormous truck traffic resulting therefrom, was borne by the State Roads of Maryland. In addition to these war activities, freight motor lines from Baltimore to Washington, Philadelphia, New York, and various points throughout Maryland, and the weight of many of these trucks when loaded, was in excess of the loads for which our early bridges were designed (State Roads Commission 1920:56).

Published on separate sheets, the new standard plans (State Roads Commission 1919) for slab bridges reveal that the major changes was an increase in roadway width from 22 feet to 24 feet and a redesign of the reinforcement. The slab spans continued to feature solid parapets integrated into the span. The range of span lengths remained 6 to 16 feet, but the next year (1920) witnessed the issue of a supplemental plan for a 20 foot long slab span (State Roads Commission 1920).

The 1924 standard plans remained in effect until 1930, when the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase load bearing capacities. The reinforcing bars were increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area. The buildings around the bridge are much older than the bridge.

**Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?**

The bridge is located in a rural area with many structures dating from the late nineteenth century to the early twentieth century. The area possess a high degree of integrity. It has potential as a rural historic landscape. The bridge would not detract from the historic/visual character of the potential district.

**Is the bridge a significant example of its type?**

No, this bridge is an undistinguished example of a standardized concrete bridge.

**Does the bridge retain integrity of important elements described in Context Addendum?**

Yes, the character defining elements have retained their integrity.

**Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?**

No, this is an undistinguished, standardized bridge conforming to standardized state plans.

**Should the bridge be given further study before an evaluation of its significance is made?**

No further evaluation is necessary to determine National Register significance. However, additional research concerning the history of this bridge and its relationship to the surrounding landscape may be useful in providing a more complete picture of the bridge's background.

F-8-153

BIBLIOGRAPHY:

County inspection/bridge files  
Other (list):

SHA inspection/bridge files X

SURVEYOR:

Date bridge recorded 8/95

Name of surveyor Leo Hirrell

Organization/Address P.A.C. Spero & Company, 40 W. Chesapeake Avenue, Suite 412, Baltimore, Maryland 21204

Phone number 410-296-1635

FAX number 410-296-1670

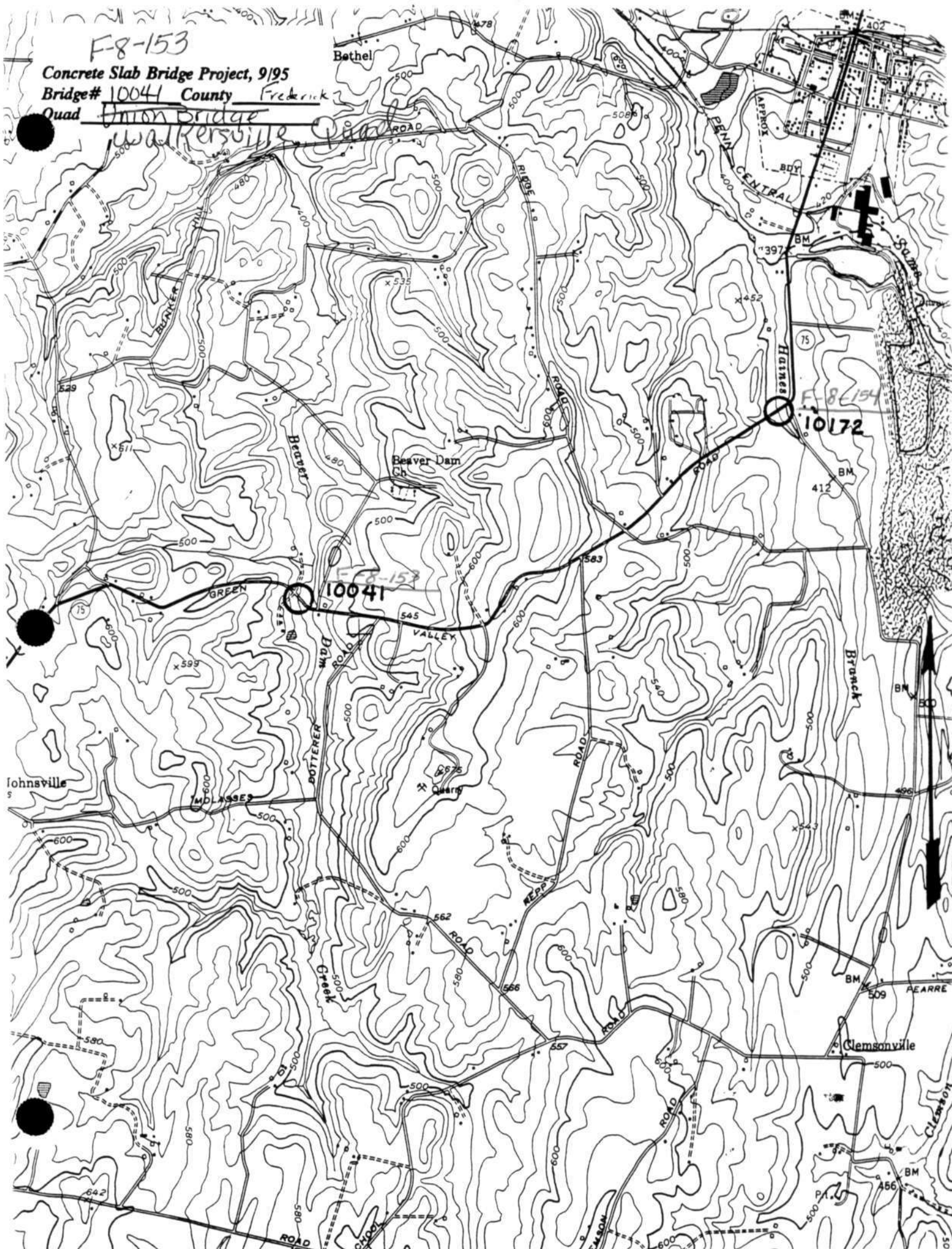
F-8-153

Concrete Slab Bridge Project, 9/95

Bridge# 10041 County Frederick

Quad Union Bridge

Walkersville





Inventory # F-8-153

Name 10041-MD75 OVER BEAVER DAM CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH EAST

Number 1 of 35 4





Inventory # F-8-153

Name 10041-MOTS OVER BEAVER DAM CREEK

County/State FREDERICK COUNTY/MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING NORTH

Number 2 of 35 4



Inventory # F-8-153

Name 10041-MD 75 OVER BEAVER DAM CREEK

County/State FREDERICK COUNTY/MO

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH WEST

Number 3 18 of 35 4



Inventory # F-8-153

Name 10041-MD 75 OVER BEAVER DAM CREEK

County/State FREDERICK COUNTY/MO

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION LOOKING SOUTH

Number 7 of 354